

ICP

BUNKER HILL

SUPERFUND SITE

ICP

*INSTITUTIONAL
CONTROLS PROGRAM*

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*UNIQUE APPROACH
FOR A DIFFERENT
TYPE OF CLEAN-UP*

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**Clean-up at the Bunker Hill Site addresses
surficial contamination only.**

**Partial removal has left contamination at
depth site-wide.**

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Partial removal requires management of barriers and caps in perpetuity.

How is this being accomplished?

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Advantages of a partial removal:

- **Avoided Cost**
 - ✓ **Saved the Upstream Mining Group (UMG)**
\$ 152 Million (Populated Areas Clean-up)
 - ✓ **Saved the Governments \$ 68 Million**
(Non-Populated Areas Clean-up)
- **Less Material To Dispose Of**
- **Less Replacement Material Needed**

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Taskforce Provisos:

- **Institutional Controls must minimize inconvenience, cost and loss of land use options to local residents**
- **Institutional Controls must utilize, to maximum extent practicable, existing control mechanisms and local agencies**
- **Institutional Controls must be self-sustaining and impose no additional cost on local government, residents, or property owners**

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WHAT IS IT?

The Institutional Controls Program

Is a locally enforced set of regulations designed to ensure the integrity of clean soil and other protective barriers placed over contaminants left in place throughout the Bunker Hill Superfund Site.

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PURPOSE

- **Protect public health**
- **Assist with local land transactions within the Bunker Hill Superfund Site**
 - ✓ **Conduct Commerce**

BLOOD LEAD

Box Lead Health Intervention Summary Statistics 1988-1994

Year	Number children in survey	Mean Blood Pb ($\mu\text{g/dl}$)	Number of children blood leads ($\mu\text{g/dl}$)			Percent Children ≥ 10
			≥ 25	≥ 15	≥ 10	
1988*	230	9.9	7	35	105	46%
1989*	275	11.4	8	71	154	56%
1990	362	8.9	2	41	134	37%
1991	365	6.3	2	17	56	15%
1992	415	7.4	3	31	110	27%
1993	445	5.6	1	10	66	15%
1994	416	6.2	1	15	71	17%

*does not include Pinehurst

Box Lead Health Intervention Summary Statistics 1995-2002

Year	Number children in survey	Mean Blood Pb ($\mu\text{g/dl}$)	Number of children blood leads ($\mu\text{g/dl}$)			Percent Children ≥ 10
			≥ 25	≥ 15	≥ 10	
1995	405	6.0	2	20	62	15%
1996	397	5.8	2	13	49	12 %
1997	337	5.4	0	6	36	11 %
1998	375	4.8	0	5	31	8%
1999	370	4.7	0	3	23	6%
2000	320	4.3	0	5	17	5%
2001	322	3.2	0	4	10	3%
2002	368	3.1	0	3	7	2%

DISCLOSURE ASSISTANCE

Disclosure assistance is provided to:

- **Federal Underwriters**
- **Lending Institutions**
- **Appraisers**
- **Prospective Purchasers**

576 Disclosures were completed in 2007

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All soil which contains lead in excess of 1000 ppm and lies within 12 inches of the final grade shall be:

- ✓ Removed and replaced**
- ✓ Covered with an appropriate material or structure**

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OBJECTIVES

- To see that barriers are created and/or maintained
- Operate a system of activity controls and standards to keep remaining contaminants in place.

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BARRIER:

Any physical structure, material, or mechanism that breaks the pathway between contaminants and human receptors.

- ✓ Buildings and parking lots
- ✓ Walls, floors, and ceilings
- ✓ Clean soil or gravel (<100 ppm lead)
- ✓ Asphalt and concrete
- ✓ Access control (fences, gates)

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HOW IT WORKS

All excavation, grading, and certain interior remodeling projects proposed within the boundaries of the Superfund Site must have approved permit(s) from the Panhandle Health District (PHD) and other permit authorities that have jurisdiction over land use issues.

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PERMITS ARE REQUIRED FOR:

- **Large Exterior Projects**
 - ✓ Excavation (more than 1 cubic yard)
 - ✓ Building demolition
 - ✓ Subdivisions/Planned Unit Developments
- **Interior Projects**
 - ✓ Building renovations involving:
 - Removal of insulation
 - Ceiling removal that exposes attic dust
 - Work in dirt crawlspaces or basements

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- **Rights-of-Way**

(underground utilities, gas, water, poles,
cable etc.)

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PERMITTING

The PHD permit must be issued and valid before building permits from other participating entities are valid.

REDUNDANCY

- Call before you dig
- Other permitting authorities

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CONTRACTOR LICENSING

All contractors involved in excavating, grading, construction, and certain interior remodeling projects within the Site must be licensed by PHD.

PUBLIC UTILITIES & GOVERNMENT ENTITIES

- Workers need to be licensed
- Maintain daily work logs

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INSPECTIONS

48 hour notice, excluding weekends and holidays, is required.

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Barrier Option Plan (BOP)

**All projects that require engineered plans
such as:**

- ✓ **New Subdivisions**

- ✓ **Planned Unit Developments (PUD)**

**must have a BOP prepared by a licensed
engineer.**

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- **Record of Compliance (Optional)**
 - ✓ **Small (less than 1 cubic yard) Exterior Projects**
(fencing, planting bushes, deck footers, etc.)

Upon request, the homeowner will be given a Record of Compliance that will be entered into PHD's tracking database.

HOMEOWNER SMALL PROJECTS



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FEES

There are no fees associated with contractor licensing, or work permits issued by PHD.

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DISPOSAL

Soils with lead levels greater than 350 ppm lead may be disposed of at PHD's disposal site at PHD's discretion.

DISPOSAL PRACTICES



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VIOLATIONS:

- Guilty of a misdemeanor
- Fined \$300/day for each day out of compliance **and/or**
- Six months of imprisonment in the county jail

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IN ADDITION:

Any person, association, or corporation, or the officer thereof found to be in violation of these rules shall be liable for any expenses incurred by the PHD in enforcing this act, or in removing or terminating any nuisance or health hazard.

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DATABASE

The Institutional Controls Program maintains a database, tracking system to assist the public, lenders, and prospective purchasers of property within the Site.

INCLUDING:

- ✓ Sampling data
- ✓ Remediation plot plans
- ✓ ICP permits issued
- ✓ Other barrier related information

BEST MANAGEMENT PRACTICES



BEST MANAGEMENT PRACTICES



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*AT WORK IN THE
COMMUNITY*

ICP WORKS



SILVER
MOUNTAIN
GONDOLA

ICP WORKS



BEFORE



AFTER

MORNING
STAR
LODGE

ICP WORKS



AFTER



**SUPER 8
MOTEL**

ICP WORKS



McDONALD'S



ICP WORKS



BEFORE



AFTER

**SUNNYSIDE
ELEMENTARY
SCHOOL**

ICP WORKS



SHOSHONE MEDICAL CENTER

DURING

CONSTRUCTION



2003 10 14

SHOSHONE MEDICAL CENTER



AFTER

ICP

*WE ARE
DIFFERENT*

1989 YARD LEAD CONCENTRATIONS



Terra Graphics
Environmental Engineering, Inc.

FILE
1998-10-10LRG/Smelterville/G2002
DATE **August 2003**
PROJECT NO.

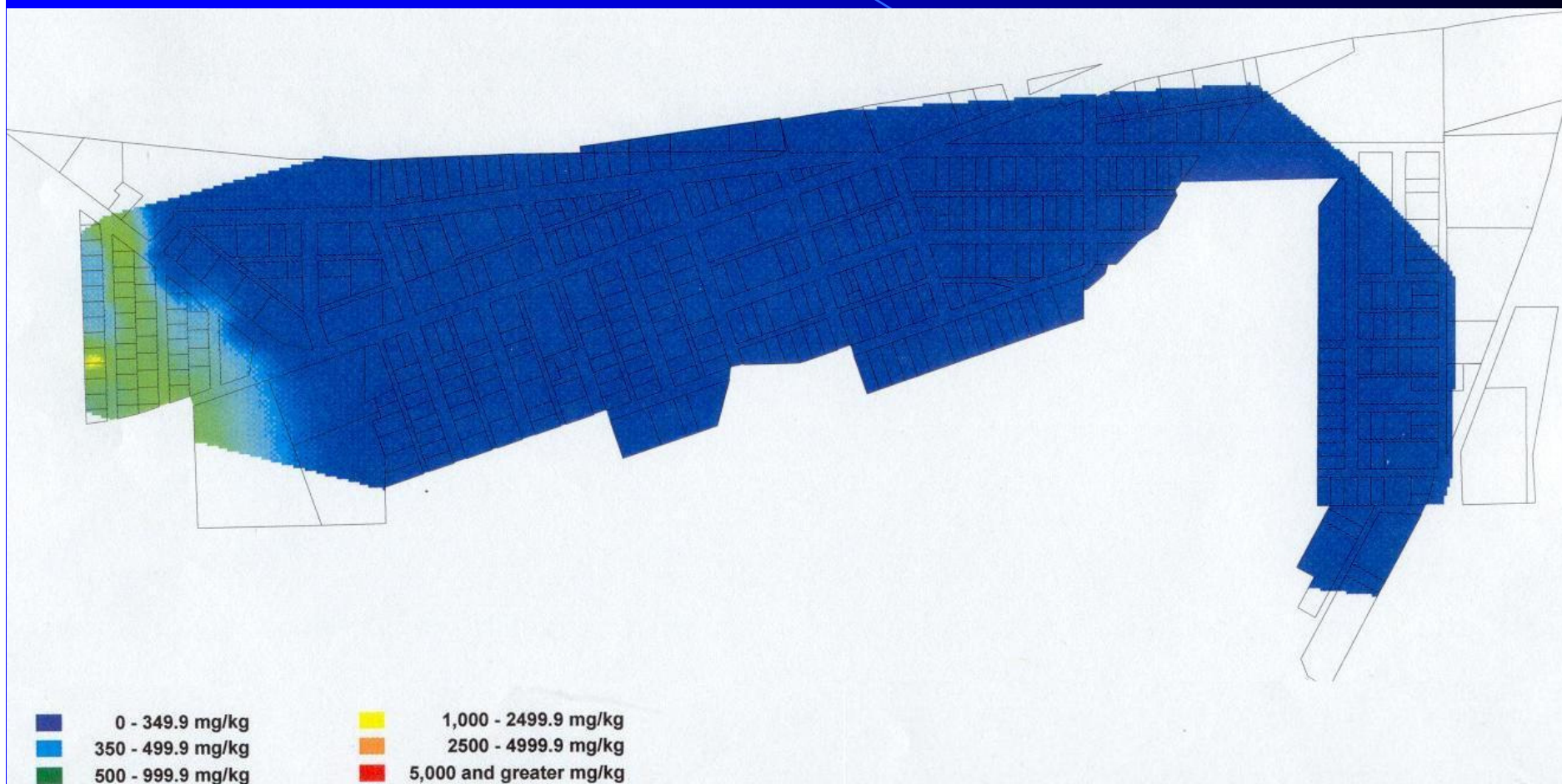
REQUESTOR **S. Spalinger**
DESIGNER **B. Bailey**
CARTOGRAPHER **B. Bailey**
APPROVED

Figure 1

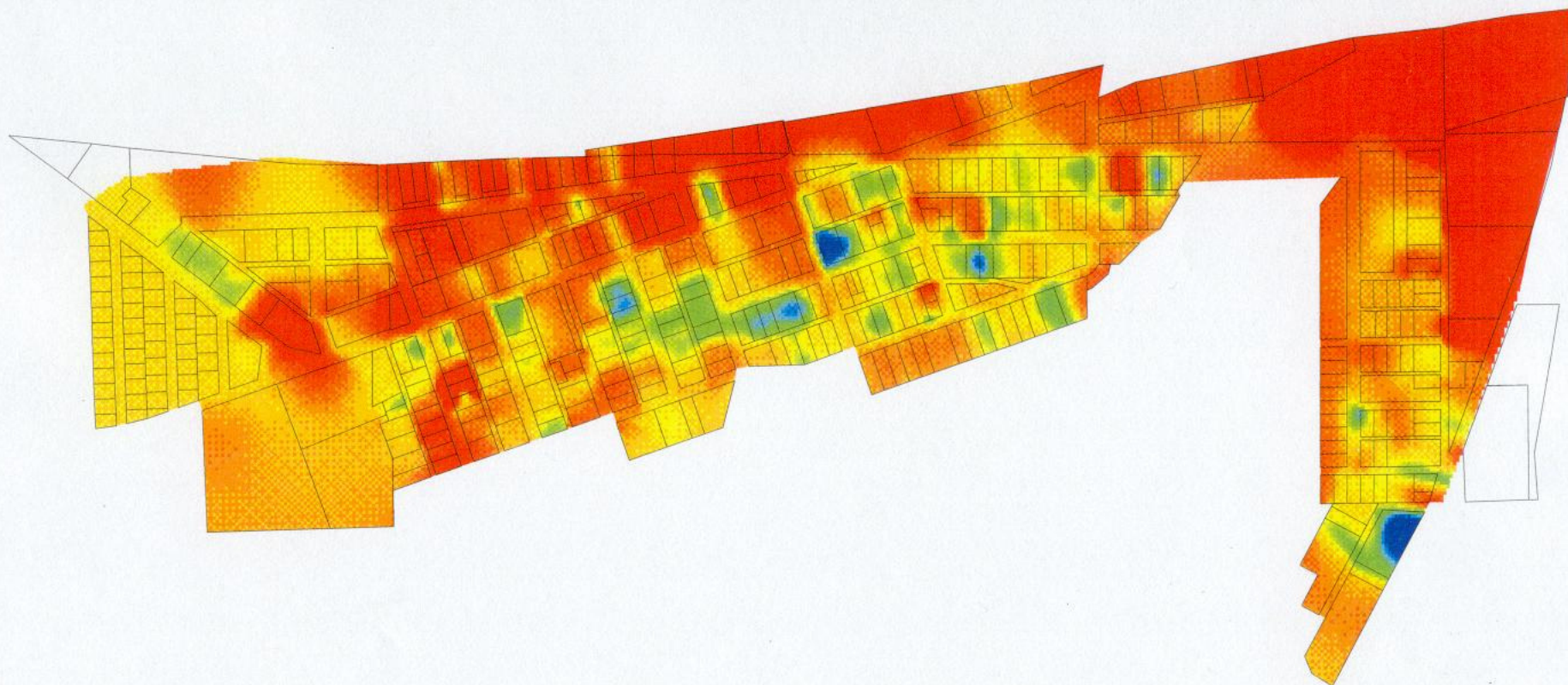
1989 Yard Lead Concentration Zones for Smelterville, Idaho

Data based on geometric means of soil lead concentrations. Soil samples taken within a 200 foot vicinity of properties.

2002 YARD LEAD CONCENTRATIONS



LEAD CONCENTRATIONS BELOW THE BARRIER



0 - 349.9 mg/kg
350 - 499.9 mg/kg
500 - 999.9 mg/kg

1,000 - 2499.9 mg/kg
2500 - 4999.9 mg/kg
5,000 and greater mg/kg

Figure 2b

Current Subsurface Soil (Below Barrier)
Lead Concentrations for
Smelterville, Idaho



Terra Graphics
Environmental Engineering, Inc.

FILE
1996-10-10 LRRG/Smelterville/smeltbarrier
DATE
October 2003
PROJECT NO.

REQUESTOR
S. Spalinger
DESIGNER
B. Bailey
CARTOGRAPHER
B. Bailey
APPROVED

ICP

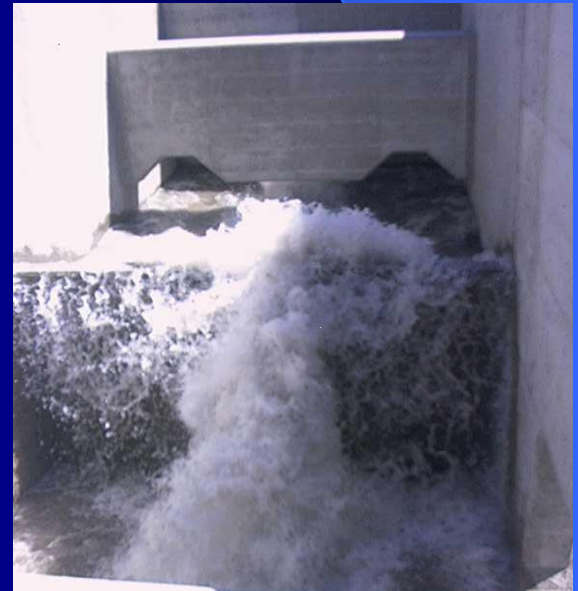
ISSUES
AND
CONCERNS



FLOODING



INFRASTRUCTURE



INFRASTRUCTURE



DISPOSAL

Critical to the successful operation of this, or any Institutional Controls Program is a fully funded, centrally located soil depository.

It must be:

- **Easily accessible**
- **Convenient to use**
- **ICP controlled**

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The background is a gradient of blue, transitioning from a darker shade on the right to a lighter shade on the left. A thin, light blue curved line starts from the left edge and arcs across the upper half of the image. In the lower right, there is a large, semi-transparent, light blue shape that resembles a spotlight beam or a stylized 'L' shape, pointing towards the center.

THANK YOU